

a¹
and panel labeled "FITC-dUTP" shows the results of incorporating biotinylated nucleotides directly labeled with fluorescein--

IN THE CLAIMS:

Please amend the claims as follows:

1 1. (Once Amended) A method for labeling nuclear DNA strands within a cell,
2 comprising the steps of:

3 a. incubating said cell containing said DNA strands with a halogenated
4 deoxynucleotide triphosphate (HdNTP) and an enzyme that catalytically
5 attaches the halogenated deoxynucleotide (HdN) of said HdNTP onto the 3'
6 OH ends of said DNA strands; and

a²
7 b. reacting the resulting HdN-DNA strands without denaturation of the DNA
8 with a labeled anti-halogenated deoxynucleotide (anti-HdN) antibody which
9 specifically binds to said HdN.

1 3. The method of Claim 1 wherein said enzyme is selected from the group
2 consisting of terminal deoxynucleotidyl transferase (TdT) and DNA polymerase.